Lennard Schober

Curriculum Vitae

(fullname) (at) t-online (dot) de
lennardschober.github.io/portfolio/
lennardschober
lennardschober

Education

2024 – 2025 (expected) **M.Sc. in Mathematics**, *University of Münster*, Germany
Current grade: 1.8 (German system)
Final grade likely to improve based on thesis and an exam

2021 – 2024 **B.Sc. in Computer Science**, *RWTH Aachen University*, Germany
Final grade: 2.6 (German system)

2020 – 2023 **B.Sc. in Mathematics**, *RWTH Aachen University*, Germany
Final grade: 2.5 (German system)

Thesis & Interests

Master's Thesis: Field: Deep Learning for PDE Approximation (title to be determined)

Research Interests: Machine Learning, Deep Learning, and Representation Learning, with a particular interest in the interplay between theory and practice. Topics of interest include Natural Language Processing, Computer Vision, and the development of scalable neural architectures for solving real-world problems involving complex and unstructured data.

Bachelor's Thesis: The Parameterized Inapproximability of the Clique Problem
Final grade: 1.7 (German system)

Relevant Experience

2024 – Present **Working Student – Deep Learning**, *Provinzial Versicherung AG*, Münster, Germany
- Contributed to the development of a large-scale ML pipeline for automated document understanding from images (e.g., emails, letters, contracts)
- Worked on and evaluated OCR models for document segmentation and text recognition
- Supported the design of a Transformer-based model (GPT-like) that classifies document types and extracts structured information in natural language
- Worked on postprocessing pipelines to convert model outputs (e.g., extracted tables and summaries) into machine-readable and human-readable formats

2022 – 2024 **Teaching Assistant**, *RWTH Aachen University*, Germany
Supported the courses *Computability and Complexity* and *Complexity Theory* by leading tutorials, grading assignments, and evaluating final exams. Provided individual support to students and assisted in the preparation of teaching materials for both courses.

Research Experience

2023 – 2023 **Research Assistant**, *Chair of Algebra and Representation Theory*, RWTH Aachen University, Germany
- Assisted in the development of an algorithm for coloring simplicial surfaces
- Implementation in GAP – based on Edmond's Blossom algorithm

Projects

Image-to-Image Translation	**Colorizer GAN**, *Huggingface Space* Developed a Generative Adversarial Network (GAN) to colorize grayscale portraits. The model achieves realistic colorizations by learning semantic features.
Sequence Modeling	**CAPTCHA Solver**, *GitHub Repository* Built a machine learning model to automatically solve text-based CAPTCHA challenges. Utilized convolutional neural networks (CNNs) for character recognition, achieving high accuracy in decoding distorted text images.
Generative Modeling	**Handwriting GAN**, *GitHub Repository* Created a GAN to generate synthetic handwritten digits resembling the MNIST dataset.
Computer Vision	**Image Classifier**, *GitHub Repository* Trained a CNN to distinguish between two visually similar subjects.
Web Development	**Algorithms Visualizer**, *Website* Developed an interactive web-based tool to visualize various algorithms, including pathfinding, sorting, and rasterization. Built using HTML, CSS, and JavaScript, the project allows users to explore the inner workings of different algorithms through intuitive visualizations.

Skills

Programming	Python, C++, C, Java, JavaScript
ML Libraries	TensorFlow, Keras, PyTorch, OpenCV
Tools	Git, LaTeX, VS Code, PyCharm, Jupyter
Languages	German (native), English (fluent), French (limited proficiency), Russian (basics)